
SMOKE ALARMS



City of East Lansing

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This publication provides guidelines for smoke alarms in residential occupancies. The code requirements herein are not all-inclusive and should not be construed to represent all code requirements for your project and are representative of all conditions that you may encounter. The requirements regarding the location of the alarms and their power source may seem confusing at times because the law requires that the alarms be installed based on when the home was constructed or when a building permit is issued. All smoke alarms must be listed and installed in accordance with applicable state law, building codes, and the manufacturers installation instructions.

NEW CONSTRUCTION

In new construction, smoke alarms must be installed in each sleeping room, outside of each sleeping area in the immediate vicinity (within 6' of the doors) of the sleeping rooms and on each story of the dwelling including basements. Smoke alarms must be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the dwelling unit. Smoke alarms must receive their primary power from the building wiring but must have a battery backup. Circuits containing smoke alarms are not permitted to have a disconnecting switch other than those required for over current protection.

REMODELED OR ALTERED DWELLINGS

Smoke alarms must be installed in existing dwellings to meet the requirements for new dwellings whenever interior alterations, repairs or additions requiring a permit occur or when one or more bedrooms are added. The alarms are required to be hardwired and interconnected and equipped with a battery backup. However, in existing portions of the building, alarms can be solely battery operated where the work does not involve removal of wall or ceiling finishes unless there is a crawl space or basement available to provide ready access.

EXISTING DWELLINGS

Location

Smoke alarms must be installed in each sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. When the dwelling unit has more than one story and in dwellings with a basement, an alarm must be installed on each story and in the basement. In dwelling units where a story or basement is split into two or more levels, the smoke alarm must be installed on the upper level except that when the lower level contains a sleeping area an alarm must be installed on each level. When sleeping rooms are on an upper level, the alarm must be placed at the ceiling of the upper level in close proximity to the stairway. In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24" or more, smoke alarms must be installed in the hallway and in the adjacent room. Alarms shall sound an alarm readily audible in all sleeping areas of the dwelling unit in which they are located.

Power Supply

Smoke alarms may be solely battery powered in older homes, depending on when construction took place. When existing rooms are converted to bedrooms the alarm may also be battery powered. However, this only applies where the conversion does not require a building permit. When the work involved in converting a room to a bedroom requires a building permit and/or when the wall or ceiling finishes are removed, the alarm in the new bedroom must receive its primary power from the building wiring and be equipped with a battery backup. Smoke alarms in newer homes must receive their primary power from the building wiring and be without a disconnecting switch other than those required for over current protection.

FACTS ABOUT SMOKE ALARMS

Protect yourself and your family. Install smoke alarms - it's the law. The International Property Maintenance Code requires that every home have working smoke alarms.

Smoke alarms save lives. Most fatal fires occur at night when people are asleep. Often, victims never wake up. A working smoke alarm will detect smoke and sound an alarm to alert you, giving you precious time to escape.

Buying the best alarm. There are many types of smoke alarms, each with different features. Alarms can be electrically connected, battery powered or a combination of both. This combination - and a pause feature to reduce nuisance alarms - is highly recommended.

One smoke alarm is not enough. Install smoke alarms on every level of your home and near sleeping areas. If you or your loved ones sleep with bedroom doors closed, install an alarm inside each bedroom.

Where to install smoke alarms. Where to install smoke alarms.

Because smoke rises, you should place alarms on the ceiling. If you cannot do this, place them high up on a wall according to *manufacturer's instructions*.

- Read the installation instructions that come with the alarm.
- Certain locations to avoid: near bathrooms, heating appliances, windows, or close to ceiling fans.
- Do not place smoke alarms in kitchens, bathrooms, furnace rooms, workshops, garages, or in other spaces where temperatures can fall below 32°F or exceed 100°F. These areas are subject to fumes, steam, dust and smoke, which can generate false alarms and contaminate the alarm's alarm.
- Do not install alarms where air movement can delay the alarm. This means they should be away from windows and at least 3' from warm or cold air ducts or return ducts.
- Do not install them between an air return and a bedroom door.
- Do not place alarms where it is inconvenient or unsafe to test them, like in tall foyers or high over a stairway. If smoke alarms are placed in a room with sloped ceilings, the alarm should be located on the high side of the ceiling.
- A smoke alarm installed in a stairwell must be so located as to ensure that smoke rising in the stairwell cannot be prevented from reaching the alarm by an intervening door or obstruction.
- A smoke alarm installed to detect a fire in the basement shall be located in close proximity to the stairway leading to the floor above. Smoke alarms should be mounted on the ceiling at least 4" from a wall or on a wall with the top of the alarm not less than 4", or more than 12", below the ceiling.
- Smoke alarms should not be located within 3' of supply registers of a forced air heating or cooling system and doors to a kitchen or bathroom with tub or shower.

Test your smoke alarm regularly. Every month, test your smoke alarms using the alarm test button.

Change your clock, change your battery. Install a new battery of the proper type at least once a year. If the low battery warning beeps, replace the battery immediately. We change our clocks each spring and fall so this is a good time to change your smoke alarm batteries too.

Gently vacuum alarm every six months. Dust can clog a smoke alarm, so carefully vacuum the inside of a battery-powered unit using the soft bristle brush. If electrically connected, shut off the power and vacuum the outside vents only. Restore power and test unit when finished.

Smoke alarms don't last forever. Smoke alarms do wear out, so if you think your alarms are more than 10 years old, replace them with new ones. Why not replace them with long-life smoke alarms that will eliminate the need for annual battery replacement and the potential hazard of dead batteries for up to 10 years.

Plan your escape. Make sure that everyone knows the sound of the smoke alarm and what to do if a fire occurs. Regularly practice your home fire escape plan. Know two ways out of every room and have a prearranged meeting place outside. Once out, stay out and call the fire department from a neighbor's home.

***The City of East Lansing allows the use of wireless interconnected smoke alarms in situations where wiring that is interconnected is not present and is not practicable to install wiring that is interconnected.*